

1	PROCESSES	184	WITH VEHICLE SUPPORT FOR DRIVE
2	AUTOMATIC CONTROL OF POWER	185	.Pivoted
	OPERATED MEANS	186	.Nontransporting means to support vehicle during tool operation
3	.Responsive to condition of cleansing means	187	..Adjustable nontransporting means
4	.Tool advance causing or controlling means	188	...Having screw threads
5	..Responsive to torque or speed condition of drive	189	...Having fluid cylinder
6	...With additional control by means sensing condition of advance means	24	.Movement of vehicle causes tool advance
7	...Drive motor motivating energy condition initiates control	25	.Vehicle motor mechanically coupled to drive tool
8	....Motive fluid flow or pressure condition of drive motor	26	..Drive gearing displaced relative to source of power
9	...Fluid flow or pressure operated advance means	27	.Vehicle motor and drive motor powered by same energy source
10	..Responsive to length of stroke of means reciprocating hammer head or tool	28	.Drive structure moved to nonuse position for transport
11	.Drive means responsive to condition of advance causing or controlling means	29	CONVERTIBLE
176	.Drive means responsive to torque or speed condition	30	WITH MEANS ENGAGED BY PART OF HUMAN OTHER THAN HAND
177	..Fluid pressure change controls drive	31	WITH WORK ENGAGING MEANS SUPPORTING DRIVE
178	..Having torque responsive clutch	32	.Anchored to work
179	..With speed responsive governor	33	..Balanced with respect to axis of tool advance
180	..With torque indicator	34	.Structure extends between opposed points
181	..Having torque sensor	35	..Tool advanced laterally of structure
182	...Strain gauge	36	.Structure engages work at point diametrically opposed to tool
183	...Proximity angle detector	37	.Relatively adjustable work engaging elements
13	DRIVE CONTROLLED BY RELATIVE AXIAL MOVEMENT OF TOOL	38	SWINGING ARM CAUSES ADVANCE WITH MEANS TO GUIDE RECTILINEAR TOOL ADVANCE
14	.Reciprocating drive member connected to pulsing fluid column	39	WITH MEANS TO ADJUST POSITION OF AXIS OF TOOL ADVANCE
15	.Drive motor controlled	40	.Drive gearing displaced relative to source of power
16	..Modified internal motor operation	41	..With plural relatively displaced gearing sections
17	...Motor piston movement modified relative to motive fluid port	42	.Plural adjustments
18	DRIVE CONTROLLED BY RELATIVE MOVEMENT OF ADVANCE CAUSING OR CONTROLLING MEANS OR MANIPULATING HANDLE	190	..Powered by motor or mechanism
19	SELF-ACTING ADVANCE AND RETRACTION CYCLE	191	...Having screw threads
20	WITH INDICATING OR SIGNALING MEANS	192	...Having turntable
21	.Distance of advance	193	...Having fluid motor
		194	....With mechanical movement
		195	....With flexible endless member
		196	...Having flexible endless member
		44	.Adjustment powered by motor or mechanism

45	<b>WITH MEANS TO SPACE AXIS OF TOOL ADVANCE RELATIVE TO PRIOR POSITION</b>	68	....Motor inlet throttle valve maintains distributor fixed
46	<b>COMBINED</b>	69	....Motor exhaust throttled
47	<b>DRIVE ADJUSTABLE TO COMPLETELY CHANGE KIND OF DRIVE</b>	70	....Mechanically maintained in fixed position
48	.Adjustable to impacting device	71	..With means to inhibit return of detritus into cleansing passage
49	<b>DRIVE BY MEANS REACTING TO ROTATING ECCENTRIC MASS</b>	72	..Fluid supplied through chamber of advance causing or controlling motor
50	<b>POWER PATHS TO PLURAL TOOLS FROM SINGLE DRIVE</b>	73	..Directed into passage in tool
51	.Drive plural means to reciprocate hammer heads or tools	74	.Plural cleansing fluid sources
52	<b>SINGLE ADVANCE CAUSING OR CONTROLLING MEANS OR MANIPULATING FOR PLURAL DRIVES</b>	75	.Cleansing fluid pump operated by drive
53	<b>HAMMER OR TOOL SHAFT RECIPROCATED BY GRIPPING MEANS WHICH RELEASE OR YIELD TO PERMIT ADVANCE</b>	76	..Pump comprises hammer head or impact transmitting anvil
54	.With fixed means cyclically contacted by grip structure	77	.Cleansing fluid controlled by control for drive or advance causing or controlling means
55	..Contact moves grips out of shaft engagement	78	.Cleansing fluid passage through hammer head
56	.Means concurrently moving shaft about an axis	79	.Drive motor or advance causing or controlling motor provided with passage for cleansing fluid
197	<b>WORK CLEANSING</b>	80	.Cleansing fluid passage in impact transmitting anvil
58	.Controlled by relative movement between drive and tool, advance causing or controlling means or manipulating means	198	.Using vacuum or reverse circulation
59	.By motive fluid for drive motor or advance causing or controlling motor	199	.Having outside conduit to supply cleansing fluid
60	..Motive fluid does not contact work but induces flow of another fluid	81	<b>MEANS TO CONTROL ADVANCE AND CYCLICALLY RECIPROCATE A CABLE-OPERATED HAMMER OR TOOL</b>
61	..Additional cleansing fluid source	82	.With means to synchronize advance with reciprocating drive
62	...With means providing for independent use of either fluid	83	.Advance means bodily reciprocated
63	...Motive fluid for cleansing bypasses motor chamber	84	.Hammer or tool cyclically disconnected from cable
64	..Supply for cleansing bypasses motor chamber	85	.With plural cable drums
65	...Controlled by motor inlet throttle valve	86	.Relatively elevated guide engaging cable between drive and hammer or tool
66	..Fluid supplied through working chamber of idled cyclically operable drive motor	87	..Drive is oscillating cable drum
67	...Supplied through distributor maintained in fixed position	88	..Drive is oscillating cable engaging means
		89	...Drive permits hammer or tool to freely drop
		90	<b>IMPACTING DEVICES (E.G., HAMMERS)</b>
		91	.Selective axial direction of impact

92	.With means to grip and release tool in timed relation to impact	200	.Hammer head driven by pulsating fluid pressure
93	.With anvil arranged to transmit torsional impact to tool	201	..Pulsation caused by mechanical movement
93.5	..Rotary tool drive having torque responsive impact	117	.Hammer head driven by electric motor
93.6	...Hammer head reciprocates along rotary axis	118	.Spring bodily cyclically moved with hammer head
93.7	..Torque transmitted from hammer head traveling axially only	202	.Hammer head driven by spring
94	.Hammer head moves in arcuate path or rotates	203	..Having cam to compress spring
95	..Hammer head reciprocates along fixed transverse axis	204	..Fluid spring
96	...Arcuate or rotary movement selectively releasable or variable independent of reciprocation	120	..With means to adjust spring force
97	...Arcuate or rotary movement transmitted to tool	121	..Spring retracts hammer head
98	..Hammer head moves out of arcuate or rotary path	122	.Hammer head driven by relatively moving motion transmitting element
99	...Movement out of path is about rotating pivot	205	..Rotary cam
100	..Hammer head movement is oscillatory	124	..Cyclically disconnected from motion transmitting element
101	.Plural relatively moved hammer heads	125	.Hammer head constitutes or fixed to drive motor cylinder
102	..One impacts another	126	.Hammer head comprises plural parts or diverse materials
103	..Concentric	127	..Piston of drive motor
104	.With means for rotating tool	128	.Impact transmitting anvil
105	..Rotated by separate motor	129	..Attachable at plurality of points along tool
106	...Rotation motor exhaust is motive fluid for hammer motor	130	..Adapted to fit tool noncircular in cross section
107	..Motive fluid supplied to rotation motor is hammer motor exhaust	131	..Formed of plural transmitting part or separate layers
108	...Reciprocating type separate motor	132	..With means to directly connect anvil to tool
109	..Rotated by hammer head or drive for hammer head	133	..Anvil retained for limited movement
110	...Rotation is intermittent or oscillatory	206	.Hammer head constitutes piston of drive motor
111	....Rotary drive path is directly through hammer head	207	..Having valve not directly associated with motive fluid for piston
112	.With means to cause or control advance of hammer head	208	...With accumulator
113	..Advance operated by hammer drive or actuated in response to hammer vibration	209	..Driven by internal combustion engine
114	.With means to reciprocate tool	135	..Motive fluid applied to striking face
115	.Length of cyclic travel of hammer head selectively adjustable	136	...Supplied through passage in striking face
		137	...Reduced area striking face
		138	..With means to conduct motive fluid to or from striking face
		210	.With impact cushioning means
		211	..Mechanical spring
		212	..Fluid spring

140	<b>DRIVE GEARING ADVANCES RELATIVE TO SOURCE OR POWER</b>	218	.Fluid motor
141	<b>ADVANCE CAUSING OR CONTROLLING MEANS</b>	219	..Having sound attenuator
142	.Operated solely by vibrations from reciprocating element in tool drive	220	..With means to rotate reciprocating piston
143	..Intermittent unidirectional rotation of advance element	221	..With manual means to control motor
144	.Reciprocatory drive and advance originate from same mechanical element	222	..Plural motors
145	.Rotary drive and advance originate from same mechanical element	164	.Means to hold and relatively rotate sections of tool shaft
146	..Friction clutch or torque yielding couple in connecting train	165	.Relatively fixed drive for an advancing tool
147	.Driven flexible member causes advance	166	..With advance stopping means having selectively operable actuating mechanism
148	.Tool advances relative to drive	167	..With advance stopping means adapted to grip tool shaft at any point
149	..Advance means engageable with tool shaft at any point	168	<b>PASSAGE IN MANIPULATING HANDLE FOR DRIVE MOTOR MOTIVE FLUID</b>
150	..Advance motor working member coaxial with tool shaft	169	.Motive fluid control valve in handle passage
151	..Cable means controls advance	170	<b>DRIVE CONTROL OPERABLE BY HAND ENGAGING MANIPULATING HANDLE</b>
152	.Motor causes or controls advance	171	<b>MISCELLANEOUS</b>
153	..Drive motor exhaust is motive fluid for advance motor		
154	..Drive motor generates advance motor motive energy		
155	..Advance motor exhaust is motive fluid for drive motor		
156	..With lock or brake operable during advance		
157	..Common control element for advance and drive motors		
158	...With relatively movable advance motor control element		
159	..Common energy supply for advance and drive motors		
160	..Advance means includes relatively movable transmission element		
161	..Advance motor control in tool drive manipulating handle		
162.1	<b>INCLUDING MEANS TO VIBRATIONALLY ISOLATE A DRIVE MEANS FROM ITS HOLDER</b>		
162.2	.Handle type holder		
213	<b>MEANS TO DRIVE TOOL ABOUT AN AXIS</b>		
214	.Plural tools		
215	.Endless flexible drive means		
216	.Gear drive		
217	.Electric motor		

**FOREIGN ART COLLECTIONS**FOR **CLASS-RELATED FOREIGN DOCUMENTS****DIGESTS**

DIG 1	<b>OPERABLE SUBMERGED IN LIQUID</b>
DIG 2	<b>SOUND MUFFLING</b>
DIG 3	<b>LUBRICATION</b>
DIG 4	<b>LIQUID OPERATED</b>